

CLAIMS

1. An internal member for a plasma treating vessel comprising a substrate and a Y_2O_3 sprayed coating covered on a surface thereof.

2. An internal member for a plasma treating vessel comprising a substrate, a metal coating formed on a surface thereof as an undercoat, and a Y_2O_3 sprayed coating formed on the undercoat as a top coat.

3. An internal member for a plasma treating vessel comprising a substrate, a metal film formed on a surface thereof as an undercoat, a middle layer formed on the undercoat and a Y_2O_3 sprayed coating formed on the middle layer as a top coat.

4. An internal member for a plasma treating vessel according to claim 1, 2 or 3, wherein the metal coating as the undercoat is a coating of one or more metals or alloys selected from Ni and an alloy thereof, W and an alloy thereof, Mo and an alloy thereof and Ti and an alloy thereof and having a thickness of 50-500 μm .

5. An internal member for a plasma treating vessel according to claim 1, 2 or 3, wherein the middle layer is a layer of Al_2O_3 or a mixture of Al_2O_3 and Y_2O_3 .

6. An internal member for a plasma treating vessel according to claim 5, wherein the middle layer is formed by a layer having a gradient concentration such that a concentration of Al_2O_3 is high at a side of the undercoat and a concentration of Y_2O_3 is high at a side of the top coat.

7. An internal member for a plasma treating vessel according to claim 1, 2 or 3, wherein the Y_2O_3 sprayed coating is a coating having a porosity of 0.5-10% and a thickness of 50-2000 μm .

8. A method of producing an internal member for a plasma treating vessel, which comprises covering Y_2O_3 on a surface of a substrate through a spraying process to form a Y_2O_3 sprayed coating.

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